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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,618	03/04/2002	Sashikanth Chandrasekaran	50277-1725	8221

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EXAMINER

DODDS, HAROLD E

ART UNIT PAPER NUMBER

2167

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/091,618	Applicant(s) CHANDRASEKARAN ET AL.	
	Examiner Harold E. Dodds, Jr.	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-96 is/are pending in the application.
- 4a) Of the above claim(s) 24-48 and 72-96 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-11,13-23,49,54-59 and 61-71 is/are rejected.
- 7) ☒ Claim(s) 2-5,12,50-53 and 60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3-8,12/2/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 24-48 and 72-96 were withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 22 November 2004.

Specification

2. The attempt to incorporate subject matter into this application by reference to a patent application titled "Managing Checkpoint Queues is a Multiple Node System" is improper because neither the application number nor the filing date is included.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 10, 18, 20-23, 49, 58, 66, and 68-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat et al. (U.S. Patent No. 6,115,715) and Sheard et al. (U.S. Patent No. 6,453,356).

5. Traversat renders obvious independent claims 1 and 49 by the following:
“...modifying the data item in a first node of said multiple caches...” at col. 3, lines 49-51, col. 6, lines 24-25, and col. 10, lines 10-12.
“...to create a modified data item...” at col. 10, lines 8-9 and col. 3, lines 49-51.
“...sending the modified data item from said first node to a second node of said multiple caches...” at col. 7, lines 61-63, col. 3, lines 49-51, col. 6, lines 24-25, and col. 10, lines 10-12.
“...without durably storing the modified data item from said first node to persistent storage...” at col. 9, lines 46-47, col. 3, lines 49-51, col. 6, lines 24-25, and col. 5, lines 17-19.
“...after said modified data item has been sent from said first node to said second node...” at col. 3, lines 49-51, col. 7, lines 61-63, and col. 6, lines 24-25,

Traversat does not teach the sending of requests, the responding to requests, the writing of data to persistent storage, and the use of master processes.

6. However, Sheard teaches the sending of requests, the responding to requests, the writing of data to persistent storage, and the use of master processes as follows:

"...said first node sending a request to a master of said data item..." at col. 13, lines 45-50, col. 54, lines 54-56, col. 68, lines 48-52, and col. 49, lines 32-34.

"...for writing said data item to persistent storage..." at col. 49, lines 32-34 and col. 12, lines 4-7.

"...and in response to said request..." at col. 5, lines 50-52.

"...said master coordinating with said multiple caches..." at col. 68, lines 48-52, col. 2, lines 45-49, and col. 42, lines 13-18.

"...to cause said data item to be written to persistent storage..." at col. 49, lines 32-34 and col. 12, lines 4-7.

It would have been obvious to one of ordinary skill at the time of the invention to combine Sheard with Traversat to send requests and respond to requests in order to standard processes to communicate between nodes in a computer system and gain acceptance of the system. Likewise, it would have been obvious to one of ordinary skill at the time of the invention to combine Sheard with Traversat to write data to persistent storage in order to retain the data when the system is shut down. Finally, it would have been obvious to one of ordinary skill at the time of the invention to combine Sheard with Traversat to use master processes in order to maintain control over key resources. Traversat and Sheard teach related applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of persistent storage, the use of applications, the use of nodes, the modification of data, the use of objects, the use of locks, and the use of messages.

7. As per claims 10 and 58, the "...step of said first node sending a request to a master of said data item...", is taught by Sheard at col. 13, lines 45-50, col. 54, lines 54-56, col. 68, lines 48-52, and col. 49, lines 32-34, the "...for writing said data item to persistent storage...", is taught by Sheard at col. 49, lines 32-34 and col. 12, lines 4-7, the "...includes the first node sending to said master a single message...", is taught by Sheard at col. 13, lines 45-50, col. 68, lines 48-52, and col. 37, lines 55-57, that requests writing a plurality of data items to persistent storage...", is taught by Sheard at col. 54, lines 54-56 and col. 12, lines 4-7, and the "...wherein said plurality of data items includes said data item...", is taught by Traversat at col. 3, lines 49-51.

8. As per claims 18 and 66, the "...determining whether a version of said data item...", is taught by Traversat at col. 8, lines 46-48, col. 4, lines 6-10, and col. 3, lines 49-51, the "...that is at least as recent as said modified version..." is taught by Traversat at col. 10, lines 38-39 and col. 4, lines 6-10, the "...has already been written to persistent storage...", is taught by Sheard at col. 12, lines 4-7, the "...and if a version of said data item...", is taught by Traversat at col. 4, lines 6-10 and col. 3, lines 49-51, the "...that is at least as recent as said modified version...", is taught by Traversat at col. 8, lines 46-48, col. 4, lines 6-10, and col. 3, lines 49-51,

the "...has already been written to persistent storage..." is taught by Sheard at col. 12, lines 4-7,

the "...then sending a write-notification message from said master..." is taught by Sheard at col. 54, lines 54-56, col. 3, lines 55-57, and col. 68, lines 48-52,

the "...to notify said first node..." is taught by Sheard at col. 48, lines 21-25 and col. 13, lines 45-50,

the "...that a version of said data item..." is taught by Traversat at col. 4, lines 6-10 and col. 3, lines 49-51,

the "...that is at least as recent as said modified version..." is taught by Traversat at col. 8, lines 46-48, col. 4, lines 6-10, and col. 3, lines 49-51,

and the "...has already been written to persistent storage..." is taught by Sheard at col. 12, lines 4-7.

9. As per claims 20 and 68, the "...selecting a particular node of said multiple caches..." is taught by Sheard at col. 8, lines 41-45, col. 13, lines 45-47, and col. 42, lines 13-18,

the "...that has a particular version of said data item..." is taught by Traversat at col. 4, lines 6-10 and col. 3, lines 49-51,

the "...wherein said particular version is at least as recent..." is taught by Traversat at col. 8, lines 46-48,

the "...as the modified data item in said first node..." is taught by Traversat at col. 3, lines 49-51 and col. 6, lines 24-25,

the "...and causing said particular version of said data item...", is taught by Traversat at col. 4, lines 6-10 and col. 3, lines 49-51,
and the "...to be written from said particular node to persistent storage...", is taught by Sheard at col. 12, lines 4-7 and col. 13, lines 45-50.

10. As per claims 21 and 69, the "...selecting the node...", is taught by Sheard at col. 8, lines 741-45 and col. 13, lines 45-47,
the "...of said multiple caches...", is taught by Sheard at col. 42, lines 13-18,
and the "...that has a most recently modified version of said data item...", is taught by Traversat at col.10, lines 38-39, col. 4, lines 6-10, and col. 3, lines 49-51.

11. As per claims 22 and 70, the "...step of the master informing the first node...", is taught by Sheard at col. 68, lines 48-52, col. 48, lines 21-25, and col. 13, lines 45-50,
the "...that said data item has been written to persistent storage...", is taught by Sheard at col. 49, lines 32-34 and col. 12, line 4-7,
the "...in response to the master receiving confirmation...", is taught by Sheard at col. 5, lines 50-52; col. 68, lines 48-52, and col. 11, lines 4-7,
and the "...that said particular version of said data item has been written to persistent storage...", is taught by Sheard at col. 4, lines 6-10, col. 49, lines 32-34, and col. 12, line 4-7.

12. As per claims 23 and 71, the "...step of the master informing a set of caches...", is taught by Sheard at col. 68, lines 48-52, col. 48, lines 21-25, col. 62, lines 17-18, and col. 42, lines 13-18,

the "...that said data item has been written to persistent storage..." is taught by Sheard at col. 49, lines 32-34 and col. 12, line 4-7,

the "...in response to the master receiving confirmation..." is taught by Sheard at col. 5, lines 50-52, col. 68, lines 48-52, and col. 11, lines 4-7,

the "...that said particular version of said data item has been written to persistent storage..." is taught by Sheard at col. 4, lines 6-10, col. 49, lines 32-34, and col. 12, line 4-7,

the "...wherein said set of caches includes caches..." is taught by Sheard at col. 62, lines 17-18 and col. 42, lines 13-18,

the "...other than said particular node..." is taught by Traversat at col. 6, lines 24-25,

the "...that contain modified versions of said data item..." is taught by Traversat at col. 3, lines 49-51 and col. 4, lines 6-10,

and the "...that are not more recent than said particular version..." is taught by Sheard at col. 40, lines 64-66 and col. 4, lines 6-10.

13. Claims 6-9 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat and Sheard as applied to the claims above, and further in view of Devarakonda et al. (U.S. Patent No. 5,659,682).

As per claims 6 and 54, the "...step of sending a request to a master is performed by sending the request..." is taught by Sheard at col. 54, lines 54-56 and col. 68, lines 48-52,

but the "...to a global lock manager..." is not taught by either Traversat or Sheard.

However, Devarakonda teaches the use of global lock managers as follows:

"...Commonly, a global lock manager is provided to resolve lock requests among tasks running on different processors and to maintain queues of tasks awaiting access to particular lock entities..."

It would have been obvious to one of ordinary skill at the time of the invention to combine Devarakonda with Traversat and Sheard to provide global lock managers in order to resolve lock requests among tasks running on different processors and to maintain queues of tasks awaiting access to particular lock entities. Traversat, Sheard, and Devarakonda teach related applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of applications, the use of nodes, the modification of data, the use of objects, the use of locks, and the use of messages.

14. As per claims 7 and 55, the "...step of sending a request to a master is performed by sending the request..." is taught by Sheard at col. 54, lines 54-56 and col. 68, lines 48-52, the "...to a lock manager that is one of a plurality of lock managers..." is taught by Devarakonda at col. 3, lines 24-28, and the "...within a distributed lock management system..." is taught by Devarakonda at col. 3, lines 20-23.

15. As per claims 8 and 56, the "...step of sending from the master..." is taught by Sheard at col. 54, lines 54-56 and col. 68, lines 48-52, the "...to interested nodes..." is taught by Sheard at col. 2, lines 45-49 and col. 13, lines 45-50,

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the "...write-notification messages indicating that said data item has been written to persistent storage..." is taught by Sheard at col. 37, lines 55-57, col. 49, lines 32-34, and col. 12, lines 4-7,

and the "...in response to said data item being written to persistent storage..." is taught by Sheard at col. 5, lines 50-52, col. 49, lines 32-34, and col. 12, lines 4-7.

16. As per claims 9 and 57, the "...step of sending write-notification messages..." is taught by Sheard at col. 54, lines 54-56, col. 12, lines 4-7, and col. 37, lines 55-57,

the "...includes the master sending to at least one interested node a single message..." is taught by Sheard at col. 68, lines 48-52, col. 54, lines 54-56, col. 2, lines 45-49, col. 13, lines 45-50, and col. 37, lines 55-57,

the "...that notifies said at least one interested node..." is taught by Sheard at col. 48, lines 21-25, col. 2, lines 45-49, and col. 13, lines 45-50,

and the "...that a plurality of data items have been written to persistent storage..." is taught by Sheard at col. 49, lines 32-34 and col. 12, lines 4-7.

17. Claims 13 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat, Sheard, and Devarakonda as applied to claims 8, and 56 above respectively, and further in view of Maris et al. (U.S. Patent No. 6,032,188) and Matena (U.S. Patent No. 6,243,814).

As per claims 13 and 61, the "...immediately sending write-notification messages..." is taught by Sheard at col. 54, lines 54-56 and col. 37, lines 55-57,

the "...to a first set of interested nodes..." is taught by Sheard at col. 2, lines 45-49 and col. 13, lines 45-50,

the "...where said first set of interested nodes includes the interested nodes..." is taught by Sheard at col. 2, lines 45-49 and col. 13, lines 45-50,

the "...that have requested said data item to be written to persistent storage..." is taught by Sheard at col. 54, lines 54-56, col. 49, lines 32-34, and col. 12, lines 4-7,

the "...to a second set of nodes..." is taught by Traversat at col. 4, lines 44-46 and col. 6, lines 24-25,

the "...where said second set of nodes..." is taught by Traversat at col. 4, lines 44-46 and col. 6, lines 24-25,

the "...includes interested nodes..." is taught by Sheard at 2, lines 45-49 and col. 13, lines 45-50,

but the "...and delaying the sending of write-notification messages..."

and the "...that do not belong to said first set of interested nodes..." are not taught by either Traversat, Sheard, or Devarakonda.

However, Mairs teaches the delaying of messages as follows:

"...This delay time period is the minimum time between transmitting data notification messages..." at col. 12, lines 25-26.

It would have been obvious to one of ordinary skill at the time of the invention to combine Mairs with Traversat, Sheard, and Devarakonda to delay messages in order allow other data processing to occur and inform the user only after the processing of current data has taken place. Traversat, Sheard, Devarakonda, and Mairs teach

related applications. They teach the use of computers, the use of networks, the use of applications, the use of nodes, the modification of data, and the use of messages.

Mairs does not teach the exclusion of nodes from node sets.

However, Matena teaches the exclusion of nodes from node sets as follows:

"...FIG. 4 shows the general situation, taking into account the possibility that any of the nodes may have a different CK number than the rest, if that node has failed and been excluded from the membership set..." at col. 5, lines 37-41.

It would have been obvious to one of ordinary skill at the time of the invention to combine Matena with Traversat, Sheard, Devarakonda, and to delay messages in order allow other data processing to occur and inform the user only after the processing of current data has taken place. Traversat, Sheard, Devarakonda, Mairs, and Matena teach related applications. They teach the use of computers, the use of networks, the use of applications, the use of nodes, and the use of messages and Traversat, Sheard, Devarakonda, and Matena teach the use of databases.

18. Claims 14, 16, 62, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat, Sheard, and Devarakonda as applied to the claims above, and further in view of Maris et al. (U.S. Patent No. 6,032,188).

As per claims 14 and 62, the "...to at least one interested node...", is taught by Sheard at col. 2, lines 45-49 and col. 13, lines 45-50, but the "...delaying the sending of write-notification messages...", is not taught by either Traversat, Sheard, or Devarakonda.

However, Mairs teaches the delaying of messages as follows:

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"...This delay time period is the minimum time between transmitting data notification messages..." at col. 12, lines 25-26.

It would have been obvious to one of ordinary skill at the time of the invention to combine Mairs with Traversat, Sheard, and Devarakonda to delay messages in order allow other data processing to occur and inform the user only after the processing of current data has taken place. Traversat, Sheard, Devarakonda, and Mairs teach related applications. They teach the use of computers, the use of networks, the use of applications, the use of nodes, the modification of data, and the use of messages.

19. As per claims 16 and 64, the "...write-notification message is sent to the at least one interested node...", is taught by Sheard at col. 37, lines 55-57, col. 54, lines 54-56, col. 2, lines 45-49, and col. 13, lines 45-50, the "...in response to the at least one interested node...", is taught by Sheard at col. 5, lines 50-52, col. 2, lines 45-49, and col. 13, lines 45-50,

and the "...requesting that said data item be written to persistent storage...", is taught by Sheard at col. 54, lines 54-56, col. 49, lines 32-34, and col. 12, line 4-7.

20. Claims 15 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat, Sheard, Devarakonda, and Maris as applied to claims 14 and 62 above respectively, and further in view of Yohe et al. (U.S. Patent No. 6,012,085).

As per claims 15 and 63, the "...write-notification message is sent...", is taught by Sheard at col. 37, lines 55-57, col. 54, lines 54-56,

the "...to the at least one interested node...", is taught by Sheard at col. 2, lines 45-49 and col. 13, lines 45-50,

the "...made by said at least one interested node...", is taught by Sheard at col. 2, lines 45-49 and col. 13, lines 45-50,

but the "...in response to a lock request...", is not taught by either Traversat, Sheard, Devarakonda, or Maris.

However, Yohe teaches responding to lock requests as follows:

"...The cache verifying computer includes means for recognizing a LOCK request from the remote client computer and for obtaining a lock on the data from the file server computer in response to the LOCK request..." at col. 3, lines 37-41.

It would have been obvious to one of ordinary skill at the time of the invention to combine Yohe with Traversat, Sheard, Devarakonda, and Mairs to respond to lock requests in order provide for the control of access to parts of database by applications running of remote terminls and thus provide for wider access to the database.

Traversat, Sheard, Devarakonda, Mairs, and Yohe teach related applications. They teach the use of computers, the use of networks, the use of applications, the use of nodes, the modification of data, and the use of messages and Traversat, Sheard, Devarakonda, and Yohe teach the use of caches, the use of objects, and the use of locks.

21. Claims 17 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat, Sheard, Devarakonda, and Maris as applied to claims 14 and 62 above respectively, and further in view of Srblijic et al. (U.S. Patent No. 5,933,849).

As per claims 17 and 65, the "...write-notification message is sent..." is taught by Sheard at col. 37, lines 55-57, col. 54, lines 54-56, the "...to the at least one interested node..." is taught by Sheard at col. 2, lines 45-49 and col. 13, lines 45-50, the "...that the master sends to the at least one interested node..." is taught by Sheard at col. 68, lines 48-52, col. 54, lines 54-56, col. 2, lines 45-59, and col. 13, lines 45-50, the "...for the at least one interested node..." is taught by Sheard at col. 2, lines 45-59 and col. 13, lines 45-50, the "...to transfer another data item to another node..." is taught by Sheard at col. 6, lines 22-26 and col. 13, lines 45-50, but the "...within a ping request..." is not taught by either Traversat, Sheard, Devarakonda, or Maris.

However, Srbljic teaches the use of ping requests as follows:

"...On the other hand, if cache E fails to respond to a request for the object from cache A, then the cache E or the connection to cache E may be inoperative, and another cache on the directory list must be selected and sent a UDP ping request..." at col.

It would have been obvious to one of ordinary skill at the time of the invention to combine Srbljic with Traversat, Sheard, Devarakonda, and Mairs to respond to lock requests in order provide for the control of access to parts of database by applications running of remote terminals and thus provide for wider access to the database. Traversat, Sheard, Devarakonda, Mairs, and Srbljic teach related applications. They teach the use of computers, the use of networks, the use of nodes, and the use of

messages and Traversat, Sheard, Devarakonda, and Srblijic teach the use of caches, the use of objects, and the use of locks.

22. Claims 11 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat and Sheard as applied to claims 10 and 48 above respectively, and further in view of Ranger (U.S. Patent No. 5,999,940).

As per claims 11 and 59, the "...step of sending a single message includes sending a message..." is taught by Sheard at vol. 54, lines 54-56 and col. 37, lines 55-57,
the "...to request that all data items..." is taught by Sheard at col. 54, lines 54-56 and col. 49, lines 32-34,
the "...be written to persistent storage..." is taught by Sheard at col. 12, lines 4-7,
but the "...that identifies a bin..."
and the "...that belong to the bin..." are not taught by either Traversat or Sheard.

However, Ranger teaches the use of bins as follows:

"...If the first `M` items are not all members of the same class, even if members of the same superclass, (step 706), then the classification criterion becomes "By Class" (step 726). In this case, class names of the different classes of the first `M` items are used as bin categories. If there are other, different classes among the items beyond the first `M` items, or if the number of classes exceed `R` (step 728), the system provides an "other" bin for these classes (step 730)..." at col. At col. 20, lines 30-37.

It would have been obvious to one of ordinary skill at the time of the invention to combine Ranger with Traversat and Sheard to provide bins in order to provide containers for different classes of objects. Traversat, Sheard, and Ranger teach related

applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of applications, the modification of data, the use of objects, and the use of messages and Sheard and Ranger teach the use of queries.

23. Claims 19 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat and Sheard as applied to claims 18 and 66 above respectively, and further in view of Frank et al. (U.S. Patent No. 6,832,120).

As per claims 19 and 67, the "...if a version of said data item...", is taught by Traversat at col. 8, lines 46-48, col. 4, lines 6-10, and col. 3, lines 49-51, the "...that is at least as recent as said modified version...", is taught by Traversat at col. 10, lines 38-39 and col. 4, lines 6-10, the "...has not already been written to persistent storage...", is taught by Sheard at col. 62, lines 62-64 and col. 12, lines 4-7, the "...then sending a write-perform message from said master...", is taught by Sheard at col. 54, lines 54-56, col. 3, lines 55-57, and col. 68, lines 48-52, the "...for said modified version...", is taught by Traversat at col. 4, lines 6-10, col. 3, 49-51, the "...to be written to persistent storage...", is taught by Sheard at col. 12, lines 4-7, but the "...to grant permission...", is not taught by either Traversat or Sheard.

However Frank teaches the granting of permission as follows:

"...Each of these user objects can be granted or denied permissions to any of the Security Permissions in each of the 8 Security Groups..." at col. 7, lines 15-17.

It would have been obvious to one of ordinary skill at the time of the invention to combine Frank with Traversat and Sheard to grant permissions in order to allow different users or processes to either access to or modify parts of databases. Traversat, Sheard, and Frank teach related applications. They teach the use of computers, the use of databases, the use of networks, the use of caches, the use of persistent storage, the use of applications, the use of nodes, the modification of data, the use of objects, and the use of messages and Sheard and Frank teach the use of queries.

Allowable Subject Matter

24. Claims 2-5, 12, 50-53, and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner has not been able to identify any prior art that teaches the use of an ordered series of bins where the ordered series corresponds to time ranges.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is (571)-272-4110. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571)-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2167

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harold E. Dodds, Jr.

Harold E. Dodds, Jr.
Patent Examiner
January 10, 2005


GRETA ROBINSON
PRIMARY EXAMINER